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Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development

Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child

Report of the Office of the United Nations High Commissioner for Human Rights

Summary

The present analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child is submitted pursuant to Human Rights Council resolution 32/33. In the study, the Office of the United Nations High Commissioner for Human Rights examines the impacts of climate change on children and the related human rights obligations and responsibilities of States and other actors, including the elements of a child rights-based approach to climate change policies. The study provides examples of good practices and concludes with several recommendations.

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I. Introduction

1. The present study is submitted pursuant to Human Rights Council resolution 32/33, in which the Council requested the Office of the United Nations High Commissioner for Human Rights (OHCHR) to conduct a detailed analytical study, in consultation with relevant stakeholders, on the relationship between climate change and the full and effective enjoyment of the rights of the child.

2. On 9 September 2016, OHCHR circulated a note verbale and questionnaire to Member States requesting inputs for the study. Communications were also sent to other stakeholders, including international organizations, national human rights institutions and civil society. Their inputs were summarized in a conference room paper prepared by OHCHR in advance of the panel discussion on the adverse impact of climate change on States' efforts to realize the rights of the child and related policies, lessons learned and good practices, held on 2 March 2017.[1] The panel discussion, written inputs, consultations and independent research have informed the present study.

3. In the study, OHCHR examines the impacts of climate change on children and the related human rights obligations and responsibilities of States and other actors, including the elements of a child rights-based approach to climate change policies. It provides examples of good practices and concludes with concrete recommendations for fulfilling human rights obligations, particularly those related to children's rights, in the context of climate change.

II. Key impacts of climate change on children

4. Children are disproportionately affected by changes in their environment, due to their unique metabolism, physiology and developmental needs.[2] Changes in temperature, air and water quality and nutrition are likely to have more severe and long-term impacts on children's health, development and well-being. Young children, because of their less developed physiology and immune systems, will experience most intensely the effects of climate change-related stresses.[3] During childhood, alterations to the social and physical environment can have far-reaching implications for children's long-term physical and mental health and overall quality of life.

5. According to United Nations Children's Fund (UNICEF), there may be no greater threat facing the world's children, and future generations, than climate change.[4] In 2014, there were 2.2 billion children in the world, with approximately 30 per cent of the world's population being under 18 years old.[5] Existing and future demographic trends reveal that many of the countries that have been identified as highly vulnerable to climate change also have higher proportions of children in their overall population. These include parts of South Asia, the Pacific islands and other small island developing States, equatorial Africa and the Pacific coast of South America.

6. As discussed below, some of the most substantial impacts of climate change on children are caused by extreme weather and natural disasters, water scarcity and food insecurity, air pollution and vector-borne diseases and resulting psychological trauma. Children in vulnerable situations are disproportionately affected by climate change.

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[1] For the summary of the panel discussion, see A/HRC/35/14. The original inputs received and the informal summary of those inputs are available at www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/ChildRights.aspx.

[2] See generally World Health Organization (WHO), *Inheriting a Sustainable World? Atlas on Children's Health and the Environment* (2017), available at www.who.int/ceh/publications/inheriting-a-sustainable-world.en/.

[3] P.J. Landrigan and A. Garg, "Children are not little adults", in *Children's Health and the Environment: A Global Perspective*, J. Pronczuk-Garbino, ed. (Geneva, WHO, 2005).

[4] UNICEF, *Unless We Act Now: The Impact of Climate Change on Children* (New York, 2015), p. 6.

[5] UNICEF, *The State of the World's Children 2014: Every Child Counts* (New York, 2014).

A. Extreme weather and natural disasters

7. Climate change contributes to the increasing frequency and intensity of extreme weather events. Globally, nearly 160 million children have been identified as living in areas of high or extremely high drought severity.[6] More than half a billion children live in zones of extremely high flood occurrence, and approximately 115 million children live in zones of high or extremely high tropical cyclone risk.[7] Even under a medium-low emission scenario, the Intergovernmental Panel on Climate Change predicts a global sea-level rise of 0.53 metres by 2100, with coastal and low-lying areas at risk of submergence, flood damage, erosion and impeded drainage.[8] Floods and other natural disasters caused by extreme weather are likely to elevate mortality and morbidity among children.

8. Young children are more susceptible to injury and death during natural disasters. In the aftermath of the 2010 floods in Pakistan, rates of under-5 mortality in flood-affected areas were notably higher than the national average.[9] Natural disasters can also result in the separation of children from their family unit, increasing their vulnerability to subsequent harm.

9. Climate change is also expected to increase the duration and intensity of heat waves. This will affect children disproportionately, as their bodies adapt at a slower rate to changes in heat and they may suffer from heat rash, heat-related cramps, exhaustion, renal disease, respiratory illness, stroke and death.[10]

10. Extreme weather events can disrupt access to essential educational, health and housing services. For example, children's access to education can be interrupted by damage to educational facilities and critical infrastructure and by the use of schools as emergency shelters.[11] Similarly, damage to health infrastructure and essential drug supplies can make post-emergency interventions less effective. Floods and landslides, sea-level rise and powerful storms can degrade and destroy housing units and water and sanitation infrastructure, worsening living conditions, particularly for children, in unplanned and underserviced settlements.[12]

11. Climate change-related disasters can also disrupt child protection systems and exacerbate pre-existing tensions and conflicts, leaving children susceptible to abuse, child labour, trafficking and other forms of exploitation.[13]

B. Water scarcity and food insecurity

12. Climate change is already affecting water and food supplies, with severe consequences for children in poor communities. Changing patterns of precipitation, sea-level rise and increased evaporation as a result of climate change will reduce surface and

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[6] UNICEF, *Unless We Act Now*.

[7] Ibid.

[8] Christopher B. Field and others, eds., *Climate Change 2014: Impacts, Adaptation and Vulnerability. Working Group II contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (New York, Cambridge University Press, 2014), pp. 308–309.

[9] UNICEF, *Unless We Act Now*, p. 30; see also WHO, "Pakistan floods 2010: early recovery plan for the health sector" (2011), p. 92.

[10] See, for example, Johns Hopkins Medicine, "Heat-related illnesses (heat cramps, heat exhaustion, heat stroke)", available from www.hopkinsmedicine.org/healthlibrary/conditions/pediatrics/heat-related_illnesses_heat_cramps_heat_exhaustion_heat_stroke_90,P00811/.

[11] Katie Harris and Kelly Hawthorn, "Climate extremes and child rights in South Asia: a neglected priority" (Overseas Development Institute, 2012).

[12] See generally A/64/255 on climate change and the right to adequate housing, para. 21 on the disproportionate impacts on children.

[13] Sheridan Bartlett, "Climate change and urban children: impacts and implications for adaptation in low- and middle-income countries", *Environment and Urbanization*, vol. 20, No. 2 (October 2008), pp. 509–510; Global Protection Cluster, "Strengthening protection in natural disaster response: children", available at www.globalprotectioncluster.org/en/tools-and-guidance/essential-protection-guidance-and-tools/protection-in-natural-disaster-essential-guidance-and-tools.html.

groundwater resources in most dry subtropical regions.[14] Droughts are expected to intensify, reducing access to water for personal consumption, agriculture and economic activities. Acidification and increasing water temperatures further threaten the fisheries upon which many coastal communities rely for subsistence.

69. Shortages of safe drinking water and food staples will have disproportionate impacts on children, particularly the poor. Children's consumption needs per body weight are higher than those of adults and food and water scarcity undermines their physical and cognitive growth.[15] Globally, undernutrition is responsible for nearly half of all under-5 deaths and is a major factor exacerbating the frequency and severity of other diseases and infections.[16] Inadequate responses to malnourishment during the first two years of life result in irreversible stunting with lifelong consequences for children's cognitive capacity, school performance and economic productivity.[17] It is estimated that, by 2030, climate change will result in an additional 7.5 million children under the age of 5 who are moderately or severely stunted.[18]

70. Food and water crises pose additional risks, such as increased incidences of school dropout, child labour and domestic violence. Crop and income loss has been linked to significant increases in the level of child labour used for household chores such as fetching water and searching for firewood.[19] When extreme weather affects the security of household incomes and families increase their reliance on child labour, children have less time and energy to dedicate to school activities.

C. Air pollution

71. In 2012, indoor and outdoor air pollution combined were linked to approximately [illegible] deaths among children under 5 years of age.[20] Although air pollution is not caused by climate change, some forms of air pollution cause climate change. Further, climate change can exacerbate some forms of air pollution, for example, by intensifying the toxicity of pollutants, such as ozone, a trigger of childhood asthma.[21] The heightened risk of wildfires associated with heat waves and drought affects air quality and children's respiratory systems, and warmer temperatures are also linked with the release of airborne allergens that can exacerbate asthma and allergic respiratory diseases.[22] Thus, air pollution and climate change contribute to a vicious cycle that disproportionately affects children, who, due to their higher breathing rate, are more susceptible to respiratory problems and infections related to air pollution.[23]

D. Vector-borne and infectious diseases

72. Children are more susceptible than adults to many vector-borne and infectious diseases. Waterborne diseases typically spread in the aftermath of climate change-related floods and storms, especially when water and sanitation infrastructure is damaged. Poor hygiene and consumption of contaminated water can contribute to increased incidence of diarrhoea and cholera, among other illnesses. Diarrhoea is the second leading cause of

[14] Field and others, *Climate Change 2014*, p. 232.

[15] Landrigan and Garg, "Children", pp. 3-4.

[16] UNICEF, "Undernutrition contributes to nearly half of all deaths in children under 5 and is widespread in Asia and Africa", available at https://data.unicef.org/topic/nutrition/malnutrition/.

[17] Linda G. Victora and others, "Maternal and child undernutrition: consequences for adult health and human capital", *Lancet*, vol. 371, No. 9609 (2008).

[18] WHO, *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s* (Geneva, 2014), p. 86.

[19] Kathleen Beegle, Rajeev H. Dehejia and Roberta Gatti, "Child labor and agricultural shocks", *Journal of Development Economics*, vol. 81, No. 1 (October 2006).

[20] WHO, "Achieving a Sustainable World", p. 16.

[21] UNICEF, *Unicef Briefing Note*, p. 10.

[22] Field and others, *Climate Change 2014*, p. 729.

[23] Landrigan and Garg, "Children".

mortality in children under 5.[24] By 2030, it is projected that climate change impacts will result in 48,000 additional deaths from diarrhoeal disease in children under 15.[25]

17. Climate change is also likely to expand the seasonal and geographic range of vector-borne diseases, including insect-borne diseases with hosts sensitive to variations in temperature, humidity and precipitation. Malaria is expected to expand into tropical highland regions where the medical and immunological responses of populations may be ill-equipped to cope.[26] Infants and young and poor children living in areas with substandard health facilities are at particular risk. In 2015, roughly 300,000 children under the age of 5 died from malaria;[27] the majority lived on the African continent. Outbreaks of other diseases that affect children, such as dengue, Zika, leptospirosis, viral infections, meningitis, varicella, viral hepatitis, leishmaniasis and pertussis, have been linked to climate change.[28]

E. Impacts on mental health

18. Climate change and the impacts of traumatic stress connected to climate change, such as war/insecurity, sexual and physical violence and witnessing deaths and injury related to extreme weather disasters, negatively affect children's mental health. Children who lose a family member or experience life-threatening situations as a result of the impacts of climate change have a higher chance of experiencing post-traumatic stress, anxiety disorders, suicidal ideation and depression. Disasters can also affect children's cognitive capacity with corresponding impacts on their emotional well-being. For example, children affected by El Niño during early childhood posted lower scores in language development, memory and spatial reasoning than other children of a similar age.[29] Lower cognitive functioning in early life has been shown to increase the risk of future mental health problems.[30]

19. Children may also experience anxiety related to fear of separation from their families and heightened household tensions resulting from the loss of family livelihoods.[31] Children whose families are affected by climate change may be exposed to higher risks of violence, physical abuse, child labour, trafficking and exploitation. Their needs for rest and play may be subordinated to basic survival interests. In cases of displacement, separation from traditional lands and territories, from communities and from family members can have impacts on children's education, cultural identity and access to social support systems. All of these climate impacts have potentially severe mental health repercussions.

F. Disproportionate impacts on children in vulnerable situations

20. According to the Intergovernmental Panel on Climate Change, "people who are socially, economically, culturally, politically, institutionally or otherwise marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses".[32] The negative impacts of climate change will disproportionately affect poor children, indigenous children, minorities, migrants and other children on the move, children

[24] WHO, "Diarrhoeal disease", Fact sheet No. 330 (2013), available from www.who.int/mediacentre/factsheets/fs330/en/.

[25] WHO, *Quantitative Risk*, p. 44.

[26] UNICEF, *Unless We Act Now*, p. 48.

[27] WHO, "Malaria in children under 5" (2016), available at www.who.int/malaria/areas/high_risk_groups/children/en/.

[28] A/HRC/32/23.

[29] Arturo Aguilar and Marta Vicarelli, "El Niño and Mexican children: medium-term effects of early-life weather shocks on cognitive and health outcomes" (2011).

[30] Chuan Yu Chen and others, "Mild cognitive impairment in early life and mental health problems in adulthood", *American Journal of Public Health*, vol. 96, No. 10 (October 2006).

[31] Agnes A. Babugura, "Vulnerability of children and youth in drought disasters: a case study of Botswana", *Children, Youth and Environments*, vol. 18, No. 1 (2008).

[32] Field and others, *Climate Change 2014*, p. 50.

with disabilities and others in vulnerable situations. Girls also face heightened risks due to climate change. Additionally, disproportionate impacts will be felt by children living in developing countries, particularly those in geographically vulnerable areas, such as riparian and low-lying coastal areas, arid regions, high mountains, polar zones and other delicate ecosystems. The following sections contain illustrative examples of the disproportionate impacts of climate change on girls, indigenous children, children with disabilities and children on the move.

1. Girls and pregnant women

21. Girls are more likely to be pulled from school to perform household chores, such as eldercare, fetching water and cooking, when households are affected by climate change stresses.[13] To counteract the effects of climate change on livelihoods, girls may sometimes be sold into child marriage, trafficked or forced to work, with resulting impacts on their education, health, liberty and security. Evidence also suggests that food insecurity associated with climate change disproportionately affects girls.[14]

22. Situations of crisis can exacerbate gender inequalities, affecting girls more and differently. Gender inequalities have been linked to higher rates of mortality from natural disasters among women and girls.[15] In post-disaster settings, pregnant women, with their distinct needs for maternal health care, food, water, sanitation and hygiene, face unique health risks. Exposure to extreme temperatures, infection with water- and vector-borne diseases and post-disaster emotional distress during pregnancy have been associated with negative impacts on pregnancy outcomes, including miscarriage, premature birth and anaemia.[16] Girls' security and bodily integrity can also be threatened by climate change-related displacement. Evacuation to shelters lacking safe facilities for girls has been documented to heighten risks of all forms of sexual harassment and violence, including human trafficking. This can result in higher rates of forced girl pregnancies and forced marriages.[17]

2. Indigenous children

23. Many indigenous peoples rely upon climate-sensitive ecosystems for livelihoods as well as spiritual and cultural practices. Therefore, they are particularly threatened by the degradation of land, water and biodiversity. For example, the traditional livelihoods of indigenous peoples in the Arctic have been adversely affected by rising temperatures.[18] Many indigenous children live in impoverished communities which affects their capacity for climate adaptation. Indigenous peoples constitute approximately 15 per cent of the world's poor and one third of the 900 million people living in extreme poverty in rural areas.[19] Indigenous children may also be negatively affected by actions taken to mitigate climate change, such as projects related to the production of biofuel or hydroelectric power, which have sometimes resulted in the displacement of entire indigenous communities without their free, prior and informed consent.[20]

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[13] Global Gender and Climate Alliance, *Gender and Climate Change: A Closer Look at Existing Evidence* (2016), pp. 17-18.

[14] Ibid., p. 25.

[15] Eric Neumayer and Thomas Plumper, "The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981-2002", *Annals of the Association of American Geographers*, vol. 97, No. 3 (2007).

[16] Global Gender and Climate Alliance, *Gender and Climate Change*, p. 29.

[17] Anita Swarup and others, *Weathering the Storm: Adolescent Girls and Climate Change* (Plan International, 2011), available at www.unger.org/files/weatherTheStorm.pdf; and Claudia Felsan-Bierman, "Gender and natural disaster: sexualized violence and the tsunami", *Development*, vol. 49, No. 3 (September 2006).

[18] Field and others, *Climate Change 2014*, p. 1583.

[19] Department of Economic and Social Affairs, *State of the World's Indigenous Peoples* (New York, United Nations, 2009), p. 21.

[20] United Nations Environment Programme, *Climate Change and Human Rights* (Nairobi, 2015), pp. 8-9.

3. Children with disabilities

24. The negative impacts of climate change can exacerbate inequities already experienced by children with disabilities. The Convention on the Rights of Persons with Disabilities highlights that the majority of persons with disabilities live in conditions of poverty. Children with disabilities may experience social and economic exclusion, be left out of decision-making processes and have difficulty accessing social services. They are more likely to live in poverty and to experience physical abuse, while at the same time enjoying less access to educational and medical services.[61] These factors can contribute to the disproportionate impact of climate change on children with disabilities. The negative impacts of climate change on children can also lead to an increased risk of health-related disabilities.

25. In emergencies, children with disabilities may suffer higher rates of abuse, neglect and abandonment.[62] Insufficient accessibility considerations in evacuation, response and relief efforts caused by the exclusion of disability issues from disaster planning renders children with disabilities particularly susceptible to injuries and diseases.[63] Barriers to access to food, drinking water and medical relief in the aftermath of disasters can affect health and exacerbate the effects of children's disabilities.[64]

4. Children on the move

26. Climate change is increasingly recognized as a key driver of human movement. In the most extreme cases, all inhabitants of some small island States and low-lying coastal areas may need to be relocated. An estimated 22.5 million people per year for the seven years leading up to 2015 have already been displaced by climate- or weather-related disasters.[65] These disasters are expected to increase in both frequency and intensity with further climate change.

27. When sudden or slow-onset disasters result in large-scale human movement, children may be separated from their cultural heritage and face barriers in access to schools, adequate health-care facilities and other necessary goods and services. Overcrowded shelters with inadequate sanitation and access to clean water can increase the transmission of diarrhoea and malnutrition rates, both leading causes of child mortality.[66] Inadequate security and protection in some shelters can expose children to abuse and violence. Children travelling alone or separated from their parents can be particularly at risk of emotional, physical and sexual violence.[67]

III. Human rights obligations and responsibilities of States and other actors

28. The Convention on the Rights of the Child states that the recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world. Children's rights are inalienable and universal human rights entitlements enshrined in the Convention, which is the most widely ratified human rights instrument in the world. These rights are also reflected in treaties such

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[61] UNICEF, *State of the World's Children 2013: Children with Disabilities* (New York, 2013), available at www.unicef.org/sowc2013/files/SWCR2013_ENG_Lo_res_24_Apr_2013.pdf.

[62] A/HRC/31/30.

[63] Global Partnership for Disability and Development and World Bank, "The impact of climate change on people with disabilities" (2009).

[64] WHO, "Disasters, disability and rehabilitation" (2005), available at www.who.int/violence_injury_prevention/other_injury/disaster_disability2.pdf.

[65] Internal Displacement Monitoring Center, *Global Estimates 2015: People Displaced by Disasters*, p. 8 (Geneva, 2015).

[66] UNICEF and WHO, *Diarrhoea: Why Children Are Still Dying and What Can Be Done* (Geneva, 2009), available at http://apps.who.int/iris/bitstream/10665/44174/1/9789241598415_eng.pdf.

[67] UNICEF, *The Challenges of Climate Change: Children on the Front Line* (Innocenti Insight, Florence, 2014), pp. 29-32.

as the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights. All States are obligated to respect, promote, protect and fulfil a set of interrelated and indivisible civil, political, economic, social and cultural rights for all children without discrimination.

29. The impacts of climate change outlined in the preceding section clearly undermine the effective enjoyment of the rights enshrined in the Convention on the Rights of the Child, including the rights to life, survival and development (art. 6), family relations and not to be separated from one's parents against one's will (arts. 9-10), the highest attainable standard of health (art. 24), adequate standard of living (art. 27), education (art. 28), freedom from any form of violence or exploitation (arts. 19, 32 and 34-36), recreation and play (art. 31) and the enjoyment of one's culture (art. 30).[48] The Committee on the Rights of the Child has identified climate change as one of the biggest threats to children's health and has urged States parties to put children's health concerns at the centre of their climate change adaptation and mitigation strategies.[49] It has emphasized that States have a responsibility to protect children from environmental harms.

30. The negative impacts of climate change on children trigger obligations among all duty bearers to take action to protect all children from its actual and foreseeable adverse effects.[50] The importance of children's rights in the context of climate change is explicitly recognized in the Paris Agreement under the United Nations Framework Convention on Climate Change, in which States are called on to respect, promote and consider their respective obligations on, among other things, the rights of the child and intergenerational equity when taking action to address climate change.

31. The core human rights obligations of States and other duty bearers in the context of climate change are outlined in the key messages on human rights and climate change of OHCHR.[51] These obligations require States to take a human rights-based approach to protect those most vulnerable to climate change from its worst impacts. The 2030 Agenda for Sustainable Development, the Paris Agreement, the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Addis Ababa Action Agenda of the Third International Conference on Financing for Development all reaffirm State commitments to a human rights-based approach to development and climate action. A human rights-based approach analyses obligations, inequalities and vulnerabilities and seeks to redress discriminatory practices and unjust distributions of power.[52] A child rights-based approach to climate change mitigation and adaptation builds upon the essential attributes of human rights-based approaches while incorporating the specificities of children's rights, needs and capacities.

32. The Committee on the Rights of the Child has identified four general principles of a child rights-based approach: non-discrimination, the best interests of the child, the child's right to life, survival and development and the child's right to express his or her views.[53] A child rights-based approach to climate change should take into account the following:

(a) As climate policies and programmes are formulated, the main objective should be to fulfil human rights, taking into account the specific risks faced by children, their unique developmental needs, identification of their best interests and incorporation of their views, in accordance with their evolving capacities;

(b) Children's participation in relevant decision-making processes, including those related to climate adaptation and mitigation policies, must be ensured;

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[48] See CRC/C/JAM/CO/3-4, para. 50, CRC/C/LCA/CO/2-4, para. 52, CRC/C/TUV/CO/1, paras. 7 and 55.

[49] General comment No. 15 (2013) on the right of the child to the enjoyment of the highest attainable standard of health, para. 50.

[50] See, for example, A/HRC/32/23 and A/HRC/31/52.

[51] See A/HRC/33/31, annex II.

[52] See http://hrbaportal.org/the-human-rights-based-approach-to-development-cooperation-towards-a-common-understanding-among-un-agencies.

[53] See general comment No. 5 (2003) on general measures of implementation of the Convention, para. 12.

(c) The obligations and responsibilities of duty bearers, such as States and private actors, must be clarified;

(d) Principles and standards derived from international human rights law, especially the Universal Declaration of Human Rights and the core universal human rights treaties, should guide all policies and programming.

33. A child rights-based approach requires States to take urgent action to mitigate climate change by limiting emissions of greenhouse gases in order to prevent to the greatest extent possible their negative human rights impacts on children and future generations. Protection of children's rights requires stopping development of the most carbon-intensive fossil fuels and transitioning to clean, renewable sources of energy. States also must take adaptation measures to protect and fulfil the rights of all children, and indeed all persons, particularly those most endangered by the negative impacts of climate change. All efforts to mitigate and adapt to climate change should be guided by relevant human rights norms, standards and principles, including those related to participation, access to information, transparency, accountability, equity, non-discrimination and equality.

34. In the United Nations Framework Convention on Climate Change and the Paris Agreement under that Convention, States are called on to take action on climate change on the basis of equity and in accordance with their common but differentiated responsibilities, while the Rio Declaration on Environment and Development and the Vienna Declaration and Programme of Action call for the right to development to be fulfilled so as to meet equitably the developmental and environmental needs of present and future generations. These commitments are reaffirmed in the 2030 Agenda for Sustainable Development, in which a just, equitable, tolerant, open and socially inclusive world in which the needs of the most vulnerable are met and development that benefits current and future generations are envisioned.

35. The principle of intergenerational equity underlying these frameworks places a duty on current generations to act as responsible stewards of the planet and ensure the rights of future generations to meet their developmental and environmental needs. This principle has been applied by the Committee on Economic, Social and Cultural Rights, which directed States to adopt comprehensive and integrated strategies and programmes to ensure that there is sufficient and safe water for present and future generations.[54] States also have a moral and ethical obligation to place the needs of today's children and of future generations at the core of climate change policies and actions.

36. The human rights obligations of States require both individual action and international cooperation. States, acting individually and collectively, are obligated to mobilize and allocate the maximum available resources for the progressive realization of economic, social and cultural rights, as well as for the advancement of civil and political rights and the right to development. Equitable climate action requires that the burden of addressing and preventing the adverse effects of climate change is shared, taking into consideration the common but differentiated responsibilities of States. This means that those developed countries that have contributed the most to climate change should cooperate, including through the mobilization of finance and the transfer of technology and knowledge, to strengthen climate mitigation and adaptation capacity in these developing countries that have contributed the least. Particular attention should be paid to protecting children from the adverse effects of climate change.

37. Actors other than States also bear responsibility for climate change harm. The Guiding Principles on Business and Human Rights affirm that States have an obligation to protect human rights from business harm, while private enterprises have a responsibility to respect human rights and do no harm.[55] The Committee on the Rights of the Child has called on States to protect children's rights from harm caused by business enterprises, through the adoption of mandatory requirements for children's rights due diligence by

[54] See general comment No. 15 (2002) on the right to water, para. 28.

[55] See also UNICEF, The Global Compact and Save the Children, *Children's Rights and Business Principles*, available at http://childrenandbusiness.org/.

businesses.[56] States should also ensure children's access to effective redress mechanisms for violations of their rights by businesses, including through the exercise of extraterritorial jurisdiction as appropriate.[57]

38. States are obligated to provide effective and timely remedies for climate change-related harm, including for harm caused by climate mitigation and adaptation projects. Article 2 (3) of the International Covenant on Civil and Political Rights guarantees all persons, including children, the right to an effective remedy for violations of human rights. The Committee on the Rights of the Child stresses that in cases of violations of children's rights, there should be appropriate reparation, including compensation, and, where needed, measures to promote physical and psychological recovery, rehabilitation and reintegration.[58] Article 12 (2) of the Convention on the Rights of the Child establishes that children are to be provided the opportunity to be heard in any judicial or administrative proceedings affecting them, either directly, or through a representative or an appropriate body. Children's special and dependent status, their frequent absence of legal standing, power imbalances and lack of knowledge, including with regard to climate change, can impair their access to remedies. States are obligated to take appropriate steps to empower children and ensure their access to child-sensitive judicial and administrative processes.

39. The Convention on the Rights of the Child recognizes children's rights to seek and impart information and to have access to an education that fosters respect for the environment and the development of relevant life skills and knowledge.[59] Under article 6 of the United Nations Framework Convention on Climate Change, States parties are required to promote and facilitate public access to information on climate change and its effects. A child rights-based approach to climate action requires States to provide adequate, child-accessible and timely information about climate impacts, risks and hazards. States should conduct and disclose environmental and children's rights impact assessments and ensure an adequate education related to environmental issues in order to inform children's participation in climate decision-making. Education and access to information empower children and other actors, such as health professionals and policymakers, to advocate for children's rights.

40. All children are entitled to participate, according to their age and maturity, in all decisions that have a direct and indirect impact upon their well-being. Under article 12 of the Convention on the Rights of the Child, States are required to create an enabling environment where children can freely express their views and have them given due consideration. In the 2030 Agenda for Sustainable Development children, together with young women and men, are recognized as critical agents of change who can channel their infinite capacities for activism into the creation of a better world.[60] Under article 6 of the United Nations Framework Convention on Climate Change, States are directed to promote and facilitate public participation in addressing climate change and its effects and developing adequate responses. A child rights-based approach to climate change requires that children should not be treated as passive victims of events beyond their influence, but rather as agents of change whose preferences and choices are fairly reflected in policy design and implementation. Ensuring children's education and participation as called for in the 2030 Agenda will be critical to fulfilling this objective.

[56] General comment No. 16 (2013) on State obligations regarding the impact of the business sector on children's rights.

[57] Ibid., para. 44.

[58] Committee on the Rights of the Child, general comment No. 5, para. 24.

[59] See articles 13 and 29 and Committee on the Rights of the Child, general comment No. 1 (2001) on the aims of education, para. 9.

[60] General Assembly resolution 70/1, para. 51.

IV. Good practices in promoting children's rights in climate action

41. Some States, civil society organizations and other actors have already taken measures to integrate children's rights in their climate actions. Existing good practices should be used to inform and enhance further national and intergovernmental action on climate change. These may involve, for example, educational policies, disaster risk reduction measures, strategic litigation and engagement by human rights mechanisms.

A. Educational policies

42. Education on environmental stewardship, climate change and disaster risk reduction can prepare children of all ages to better address emerging environmental challenges. Most States that provided inputs for the present study had climate change education programmes and/or strategies to develop climate change and environmental curricula.[61] The United Nations Educational, Scientific and Cultural Organization, through its Climate Change Education for Sustainable Development programme, has been working with national Governments, particularly in African and small island developing States, to integrate climate change into national curricula through innovative approaches.[62]

43. In Italy, collaboration between the ministries for the environment and for education led to the launch of new guidelines for environmental education.[63] Extracurricular projects can also foster children's activism and involvement in climate change policies. In Zambia, UNICEF has supported the Unite4Climate project, a child-led advocacy programme that empowers young people aged 11 to 17 to become climate ambassadors and agents of change within their communities and in global climate negotiations.[64] Some States have established national platforms for young people to voice their concerns and share their ideas about climate change and other issues, for example, the national environment and health platform for young people in Lithuania[65] and the Children's Parliament in Namibia.[66] In Slovenia, the Administration for Civil Protection and Disaster Relief trains young people in disaster response and ensures access to information for all children, including those with disabilities.[67]

B. Disaster risk reduction

44. The incorporation of the principle of the best interests of the child throughout disaster risk reduction, sustainable development and climate change action is key to protecting children's rights in a changing climate. In the Philippines, the Children's Emergency Relief and Protection Act of 2016 provides for specific measures to protect and educate children in the context of emergencies, ensure their participation in relevant decision-making processes and collect better data.[68] In Viet Nam, a law on environmental protection incorporates the principles of the best interests of the child and gender equality in relation to green growth and climate change;[69] the country is also considering a child-

[61] The inputs used for the study are available at www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/RightsChild.aspx.

[62] United Nations Educational, Scientific and Cultural Organization, *Not Just Hot Air: Putting Climate Change Education into Practice* (Paris, 2015).

[63] Input from Italy.

[64] Input from UNICEF and Germany.

[65] Input from Lithuania.

[66] Input from Namibia.

[67] Input from Slovenia.

[68] Input from the Philippines.

[69] Input from UNICEF.

centred programme on disaster risk reduction for 2017-2021 that would focus on capacity-building in mitigating the impacts of recurring weather risks on children.[70]

45. Indonesia has linked its Child Friendly Cities initiative with climate change and disaster risk reduction objectives by piloting a child-centred climate risk assessment method.[71] In its development cooperation policy, Germany has committed to protecting the best interests of the child and has allocated funding for climate change adaptation, resilience and disaster risk reduction projects involving children and young people.[72] At the national level, Slovakia implements the Convention of the Rights of the Child through its national plan of action for children, which is taken into account in climate policies.[73]

C. Litigation

46. While future generations lack clear legal standing under international law, domestic developments highlight ways in which their interests can be protected through climate change policies and litigation. Some national constitutions have included references to future generations in their provisions on environmental rights. Article 33 of the Constitution of the Plurinational State of Bolivia, for example, enshrines the right to a healthy, protected and balanced environment to enable the development of individuals and collectives of present and future generations. While explicitly referencing future generations, as the Plurinational State of Bolivia has done, could provide a basis for climate litigation directly on behalf of those generations, this may not be explicitly necessary to protect their interests. Climate litigation by today's children has the potential to safeguard the interests of the next generations, and a legal basis for such litigation exists in many countries. For example, in Azerbaijan, articles 30 and 38 of the Law on child rights ensure protection and emergency support to children affected by natural disasters, and article 39 of the Constitution guarantees redress for damages caused by environmental impacts.

47. In some countries, children and their representatives have already engaged in environmental litigation. In *Minors Oposa v. Secretary of the Department of Environmental and Natural Resources*, the Supreme Court of the Philippines ruled on behalf of a class representing children that the State had an intergenerational responsibility to maintain a clean environment. In *Gbemre v. Shell Petroleum Nigeria Limited and Others*, a Nigerian court ordered Shell Petroleum to take immediate steps to cease gas flaring, which contributed to respiratory diseases, greenhouse gas emissions and agricultural problems. It found that gas flaring violated the rights to human dignity and life guaranteed in the Nigerian Constitution and the African Charter on Human and Peoples' Rights. In the United States of America, a group of 21 plaintiffs between the ages of 9 and 20 have filed suit against the federal Government alleging that inadequate climate change mitigation measures constitute a violation of their constitutional rights to life, liberty and property, among others.[74] Precedents such as these demonstrate the potential role of the judicial system in protecting children from harmful activities, including those that contribute to climate change.

D. Engagement by human rights mechanisms

48. National human rights institutions, the human rights treaty bodies and the special procedures and universal periodic review of the Human Rights Council can all play a role in protecting children's rights from the impacts of climate change. The Committee on the Elimination of Discrimination against Women, for example, is currently drafting a general

[70] See www.ohchr.org/Documents/Issues/ClimateChange/RightsChild/Update14.3/StatementPanelCCandrightsofthechildHEMHAKimNgoc.pdf.

[71] Input from UNICEF.

[72] Input from Germany.

[73] Input from Slovakia.

[74] *Juliana et al. v. United States of America et al.* See Our Children's Trust (www.ourchildrenstrust.org/us/federal-lawsuit/).

recommendation on gender-related dimensions of disaster risk reduction in a changing climate,[75] while the Committee on the Rights of the Child has issued, on several occasions, concluding observations including observations and recommendations on climate change.[76] In 2015, the Commonwealth Forum of National Human Rights Institutions issued the St. Julian's Declaration on Climate Justice, in which the institutions committed to, inter alia, "promote the principle of equality and non-discrimination in climate action, including the rights of children". The Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, whose forthcoming report will focus on children, and other special procedure mandate holders have focused on the impacts of climate change on human rights in their reporting.[77] Finally, specific recommendations related to climate change and its impacts on the rights of the child have been issued on several occasions in the context of the universal periodic review of the Human Rights Council.[78]

V. Conclusions and recommendations

49. **The conclusions and recommendations below are derived from the various elements that have informed the present study.**

A. Conclusions

50. **The negative impacts of climate change, including the increasing frequency and intensity of natural disasters, changing precipitation patterns, food and water shortages, and the increased transmission of communicable diseases, threaten the enjoyment by children of their rights to health, life, food, water and sanitation, education, housing, culture and development, among others. Climate change heightens existing social and economic inequalities, intensifies poverty and reverses progress towards improvement in children's well-being. All children are exceptionally vulnerable to the negative impacts of climate change, with the youngest children being most at risk.**

51. **Climate change has a disproportionate impact on some children, including children with disabilities, children on the move, poor children, children separated from their families and indigenous children. Girls also face heightened risks due to climate change. In climate-vulnerable States and climate-sensitive areas, climate change poses a contemporaneous threat to inhabitants' rights to life, survival and development, among others. The rights and opportunities of children living in such areas can be severely affected. Beyond threatening children's physical well-being, climate change poses a threat to their cultural identity, to their connections with the natural environment and to their education.**

52. **The human rights obligations and responsibilities contained in the Convention on the Rights of the Child, the Paris Agreement and other international human rights instruments require States and other duty bearers, including businesses, to take action to protect the rights and best interests of children from the adverse effects of climate change. Many States already have in place laws, policies and commitments related to the protection of children's rights, the preservation of a healthy environment and climate change mitigation and adaptation. However, further action is needed to promote accountability for all actors, ensure children's access to justice and protect children from the negative impacts of climate change. Children have a right to meaningful participation in climate policymaking aimed at accomplishing these**

[75] See www.ohchr.org/EN/HRBodies/CEDAW/Pages/DraftGRDisasterRisk.aspx.

[76] See, for example, CRC/C/GBR/CO/5.

[77] See, for example, A/HRC/31/52 and www.thecvf.org/wp-content/uploads/2015/05/humanrightsSRHRE.pdf.

[78] See, for example, A/HRC/33/6 (Samoa, 2016), A/HRC/30/13 and Corr.1 (Marshall Islands, 2015), A/HRC/26/9 (Vanuatu, 2014), A/HRC/24/8 (Tuvalu, 2013) and A/HRC/16/7 (Maldives, 2011).

objectives and should play an active role in inspiring and shaping more effective climate policies.

53. Human rights, climate change, development and disaster risk reduction, including relevant international instruments and processes, are inextricably linked. A child rights-based approach to climate change mitigation and adaptation is called for by the intersections of these various frameworks with human rights obligations. It requires States to take affirmative measures to respect, protect, promote and fulfil the human rights of all children and to integrate their rights in all climate mitigation and adaptation policies and actions.

54. Fundamentally, a child rights-based approach requires:

(a) Ambitious mitigation measures to minimize the future negative impacts of climate change on children to the greatest extent possible by limiting warming to no more than 1.5°C above pre-industrial levels, as called for in the Paris Agreement;

(b) Adaptation measures that focus on protecting those children most vulnerable to the impacts of climate change;

(c) Mitigation and adaptation actions that are the product of participatory, evidence-based decision-making processes that take into account the ideas and best interests of children as expressed by children themselves.

55. Within these efforts, particular attention should be paid to girls, children with disabilities, indigenous children and other children who may be disproportionately affected by climate change. All children should be treated as active participants in climate action.

56. Truly sustainable, rights-based development requires climate actions that are informed by and take into consideration children's rights, intergenerational equity and the needs of future generations. These actions should be evidence based and supported by a free, transparent exchange of good practices, resources and technical assistance adequate to address the threat of climate change in line with international human rights laws, norms and standards.

B. Recommendations

57. A child-rights based approach to climate change requires all relevant actors to take steps to ensure children's rights policy coherence, empower children to participate in climate policymaking, guarantee children access to remedies for climate harm, better understand the impacts of climate change on children and mobilize adequate resources for child rights-based climate action. When pursuing these objectives, the particular needs of those children most vulnerable to climate change and its impacts must be taken into account.

1. Ensure children's rights policy coherence

58. States should ensure that children's rights considerations are integrated in their climate, disaster risk reduction and development activities. Efforts should be taken to link actions, positions and processes related to the United Nations Framework Convention on Climate Change, the Human Rights Council, the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015-2030 in order to establish a coherent approach to sustainable development that benefits all persons, particularly children. This should include:

(a) Implementing the Sustainable Development Goals relating to child poverty and malnutrition, access to education, child mortality and health, and water and sanitation, among others, in such a way as to enhance children's resilience to climate change and reduce inequalities;

(b) Integrating children's rights considerations in the implementation of the United Nations Framework Convention on Climate Change, including in the

transparency framework, in intended nationally determined contributions and other communications and in the work of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its task force on displacement, in order to promote accountability and more effective climate policies;

(c) Ensuring that climate adaptation policies improve disaster risk preparedness and enhance the adaptation capacities of all children, taking into account the needs and vulnerabilities of those most at risk. Gender considerations, for example, should be accounted for in climate change and disaster risk management policies, projects and planning processes.

59. Human rights mechanisms, including the Committee on the Rights of the Child, should consider ways to hold States accountable for their climate commitments, to better document the impacts of climate change and to promote rights-based climate action. As recommended during the day of general discussion on children's rights and the environment held by the Committee on the Rights of the Child, the issue of the environment could be routinely integrated in concluding observations. Civil society inputs to the Committee review process should address climate change and its impacts on children's rights and draw attention to the adequacy of States' individual contributions to efforts to limit climate change to 1.5°C above pre-industrial levels, as well as the impacts of climate actions. Similarly, States should use the universal periodic review mechanism of the Human Rights Council to promote accountability for climate and human rights commitments.

2. Empower children to participate in climate policymaking

60. All children, without discrimination, should be prepared for and included in climate decision-making in order to ensure that their best interests are protected. Children's involvement in the design and implementation of climate policies and climate vulnerability assessments should be facilitated according to their age and maturity.[78] Consultative mechanisms, improved dissemination of information and other strategies to engage children are needed for their meaningful participation. States should facilitate the participation of children in ongoing processes related to the United Nations Framework Convention on Climate Change that are likely to affect their development and survival.

61. Climate change education can empower educators, parents and children as agents of change. Educational curricula should transfer knowledge and develop skills that will equip children to confront climate-related challenges taking into account each child's particular local context and, as appropriate, traditional knowledge. Climate education should, inter alia:

(a) Raise awareness about appropriate lifestyle choices for sustainable development, such as low-carbon transportation, energy and consumption behaviours;[79]

(b) Emphasize solidarity, promote cooperation with children from other countries and create opportunities for children's participation in environmental decision-making;[80]

(c) Include access to up-to-date, meaningful and age-appropriate information about the causes of climate change, its impacts and adaptive responses, including disaster risk reduction and emergency preparedness.

[78] For example, the inclusion of girls as participants in the design, planning and implementation of climate strategies will lead to more effective policy formation. See, for example, United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) and Mary Robinson Foundation — Climate Justice, *The Full View: Ensuring a Comprehensive Approach to Achieve the Goal of Gender Balance in the UNFCCC Process*, 2nd ed. (2016), available at www.mrfcj.org/wp-content/uploads/2016/11/MRFCJ-Full-View-Second-Edition.pdf.

[79] See, for example, target 4.7 of the Sustainable Development Goals.

[80] See, for example, Committee on the Rights of the Child, general comment No. 1, paras. 9 and 13.

5. Guarantee children access to remedies

62. States and other responsible actors should take measures to ensure that children have access to effective remedies when they suffer harm from climate action and inaction. Such measures could include:

(a) Integrating the right to a healthy environment and the rights of future generations in national constitutions and legislation in order to promote the justiciability of those rights and strengthen accountability systems;

(b) Ratifying the Optional Protocol to the Convention on the Rights of the Child on a communications procedure, which established a complaints procedure for violations of children's rights;

(c) Employing extraterritorial jurisdiction and taking other measures, as appropriate, to ensure responsible conduct by businesses not only in emissions reductions but also in remedying past harm;

(d) Developing a loss and damage system that ensures effective remedies for climate-related human rights harm, particularly that experienced by children;

(e) Ensuring that climate mitigation and adaptation projects provide access to effective redress mechanisms for human rights harm.

4. Better understand the impacts of climate change on children

63. In order to better protect children from the impacts of climate change, all actors should support improved understanding of the relationship between climate change and children's rights. This could be promoted through measures such as:

(a) Disaggregated data collection;

(b) Impact assessments with respect to children's rights and future generations;

(c) Enhanced intersectoral cooperation, as called for in the Geneva Pledge for Human Rights in Climate Action;

(d) Establishment of standing consultative committees that include children's perspectives;

(e) Improved reporting on children's rights and climate change to relevant United Nations Framework Convention on Climate Change and human rights mechanisms.

64. In this regard, civil society actors and participants at the 2010 Social Forum have called for the appointment of a United Nations special rapporteur on human rights and climate change.[81]

5. Mobilize adequate resources for child rights-based climate action

65. States, keeping in mind their human rights obligations and their common but differentiated responsibilities and respective capabilities, should take measures to mobilize adequate resources for effective climate action that does not harm but rather benefits children. States should ensure transparent, participatory and informed decision-making in the allocation of resources, including by conducting impact assessments with respect to children's rights and future generations. Further, measures should be taken to improve international cooperation and build capacity for climate action in developing countries through the transfer of technology and the sharing of technical expertise. Mitigation must be a top priority, as it is the key to minimizing the negative impacts of climate change. In these efforts, businesses also have human rights responsibilities, which must not be neglected.

66. With regard to climate adaptation, resources should be directed towards efforts to promote non-discriminatory access to basic necessities and services for children in

[81] A/HRC/16/62

the light of the adverse effects of climate change. Investments in education and related infrastructure are a rights-based, cost-effective and sustainable method of empowering children. Health, water and sanitation, housing infrastructure and related services are also critical to children's adaptation and resilience. Disaster risk reduction, including training for teachers, parents and children, and climate-resilient schools and infrastructure, is another key area for investment. In the aftermath of climate-related disasters, resources should be devoted to ensure children's access to health services, to reunite children with their families and to not only protect them with physical support, such as food and clean water, but also to provide psychosocial care to prevent or address fear and trauma.[87] Support should take into account children's distinct needs for play and safety.

[87] See Committee on the Rights of the Child, general comment No. 17, para. 49.